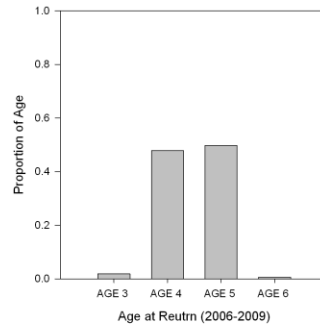
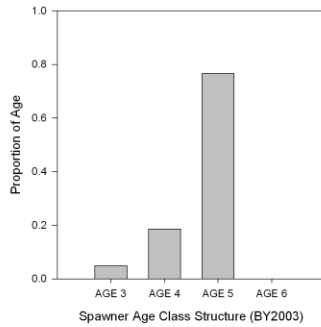


Natural Production Questions and Issues

Definitions

Age Structure = proportion of an annual escapement composed of individuals of *different* brood years.

Age-at-Return = proportion of individuals returning at various age groups (year class) from a *single* brood year.



Note: total age vs ocean age important to consider in populations with diverse age-at-emigration.

Natural Production Questions and Issues

Why be concerned with natural production age and size at maturity?

1) Measure of population diversity

- Uniqueness
- Resiliency/Adaptation

2) Supports productivity assessment

- Progeny per parent ratio
- Fecundity

3) Focus of our management actions

- Preserve
- Enhance
- Evaluate

4) Annual management decisions

- Run-forecasts supporting harvest rates

Natural Production Questions and Issues

Potentially poor assumptions.

- 1) Stable age structure within population
- 2) Similar age-at-return across populations
- 3) Minimal occurrence of precocial, resident, or one ocean age males
- 4) Carcass surveys provide unbiased measure of age structure
- 5) Spawner age structure = spawner contribution
(i.e. random mating)
- 6) Age structure for males and females should be equal